UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/562,896	12/29/2005	Johannus Leopoldus Bakx	NL 030845	6920

24737 7590 08/24/2010

PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER	
CHOW, LIXI	
ART UNIT	PAPER NUMBER
2627	
MAIL DATE	DELIVERY MODE
08/24/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/562,896	BAKX, JOHANNUS LEOPOLDUS	
	Examiner	Art Unit	
	LIXI CHOW	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 June 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6 and 21-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6 and 21-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 26 is objected to because of the following informalities: the word "to" should be added before the phrase "a radius" on line 2 of the claim. Appropriate correction is required.

Claim 28 is objected to because of the following informalities: the word "duel" in line 9 of the claim should be --dual--. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-6, 21-24 and 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (US 2003/0227846; hereafter Lee) in view of Hsiao (US 6,738,329).

Regarding claim 1:

Lee discloses a recording method for recording a data stream on a dual layer recordable disk having a first layer and a second layer (see Fig. 1), the method comprising an act of performing an Optimum Power Control (OPC) procedure for determining an actual optimum writing power (see Fig. 2; test zone corresponds to OPC-area; and each layer includes two test zones), said Optimum Power Control procedure being performed in OPC-areas on the disk, at least one of the OPC-areas is positioned on the first or second layer and located relatively close to a radius where the data stream switches from the first layer to the second layer (see Fig. 1 and Fig. 2; OPC is being performed in the test zone in LO area on the first layer or in LI area on the

second layer, located relatively close to a radius where the data stream switches from the first layer to the second layer).

Lee fails to disclose that the Optimum Power Control procedure is being performed in variably located OPC-areas on the disk that are variably located on the first layer and the second layer; however, Hsiao discloses a recording method for recording information on a recordable disk, the method comprising a step of performing an Optimum Power Control procedure for determining an optimum writing power, said Optimum Power Control procedure being performed in variably located OPC-areas on the disk (see Figs. 3A-3B and col. 4, lines 31-58).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the method of Lee with the teaching of Hsiao to realize a method of performing OPC procedure in variably located OPC-areas that are variably located on each recording layer. One of ordinary skill in the art would have been motivated to do this because more desirable optimum writing power can be obtained for a particular location of the disk; hence high quality signal can be achieved.

Regarding claim 2:

Lee does not disclose a location of the at least one of the variably located OPC-area depends on the amount of information to be recorded on the disk; however, Hsiao discloses the recording method, wherein a location of the at least one of the variably located OPC-areas depends on the amount of information to be recorded on the disk (see col. 4, lines 54-58).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the method of Lee, such that the location of the at least one of the variably located OPC-area depends on the amount of information to be recorded on the disk. One

of ordinary skill in the art would have been motivated to do this because more desirable optimum writing power can be obtained for the corresponding recording data to be recorded on the disk.

Regarding claim 3:

Lee discloses the recording method, wherein an OPC area is located in the Middle Zone of the at least one of the layers of the dual layer disk (see Fig. 1; the LO and LI of layers 0 and 1 on the right side of the figure include OPC area, which is located in the Middle Zone).

As mentioned above, Lee does not disclose OPC area being variably located; however, Hsiao discloses the recording medium, wherein an OPC area of the variably located OPC-areas is located in the Middle Zone of the disk (see Fig. 3A or 3B; area 330c is located in the Middle Zone).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Lee and Hsiao. The combination of Lee and Hsiao would have yielded a predictable result, since both Lee and Hsiao teaches an optical recording medium having plurality of OPC-areas located at different location through out the recording medium. One of ordinary skill in the art would have been motivated to do this because more desirable optimum writing power can be obtained for a recording medium having dual recording layers.

Regarding claim 4:

Lee disclose the recording method, comprising a further step of performing a further Optimum Power Control (OPC) procedure, said further Optimum Power Control procedure being performed in a further OPC-area located at a fixed position on at least one of the layers of the dual layer disk and reserved for use by the further Optimum Power Control procedure (see

Fig. 1; LI of layer 0 on the left side of the figure includes an OPC-area located at a fixed position).

Regarding claim 5:

Lee discloses the recording method, wherein the further Optimum Power Control procedure is performed in a first fixed OPC-area located on the first layer and in a second fixed OPC-area located on the second layer (see Fig. 1 and Fig. 2; LI of layer 0 includes a first fixed OPC-area and LO of layer 1 includes a second fixed OPC-area).

Regarding claim 6:

Lee discloses a recording device (see Fig. 6) for recording a data stream on a dual layer recordable disk having a first layer and a second layer, the device comprising:

means for performing an optimum power control (OPC) procedure (see Fig. 6, element 120) for determining an actual optimum writing power, said optimum power control procedure being performed in OPC-areas on the disk that are located on the first layer and the second layer (see Fig. 2; each layer includes two test zones), at least one of the OPC-areas is positioned on the second layer and located relatively close to the radius where the data stream switches from the first layer to the second layer (see Fig. 1 and Fig. 2; OPC is being performed in the test zone in LO area on the first layer or in LI area on the second layer, located relatively close to a radius where the data stream switches from the first layer to the second layer);

means for writing the data stream on the dual layer disc using the determined optimum writing power (see Fig. 6, element 130).

Lee fails to disclose that the Optimum Power Control procedure is being performed in variably located OPC-areas on the disk that are variably located on the first layer and the second

layer; however, Hsiao discloses a recording method for recording information on a recordable disk, the method comprising a step of performing an Optimum Power Control procedure for determining an optimum writing power, said Optimum Power Control procedure being performed in variably located OPC-areas on the disk (see Figs. 3A-3B and col. 4, lines 31-58).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the device of Lee with the teaching of Hsiao to realize a recording device for performing OPC procedure in variably located OPC-areas that are variably located on each recording layer. One of ordinary skill in the art would have been motivated to do this because more desirable optimum writing power can be obtained for a particular location of the disk; hence high quality signal can be achieved.

Regarding claim 21:

Lee discloses a recording method for recording a data stream on a dual layer recordable disk having a first layer and a second layer (see Fig. 1; layer 0 is first layer and layer 1 is second layer), a lead-in zone (Fig. 1, area LI), a data area for recording user data (Fig. 1, area between LI and LO) and a lead-out zone (Fig. 1, area LO), the method comprising an act of performing an Optimum Power Control (OPC) procedure for determining an actual optimum writing power (see Fig. 2; lead-in area and lead-out area includes test zone area for determining actual optimum write power).

Lee does not show that Optimum Power Control procedure being performed in an OPC-area in the data area and the location of the OPC-area in the data area depending on an amount of data in the data stream to be written on the disc.

However, Hsiao discloses a recording method for recording a data stream on a recordable disk, the method comprising an act of performing an Optimum Power Control (OPC) procedure, said Optimum Power Control procedure being performed in an OPC-area in a data area, the location of the OPC-area in the data area depending on an amount of data in the data stream to be written on the disc (see Figs. 3A-3B and col. 4, lines 31-58).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the method of Lee, such that the location of the OPC-area depends on the amount of information to be recorded on the disk as taught by Hsiao. One of ordinary skill in the art would have been motivated to do this because more desirable optimum writing power can be obtained for the corresponding recording data to be recorded on the disk.

Regarding claim 22:

Claim 22 recites similar limitations as claim 21; hence, claim 22 is rejected under the same reasons set forth in claim 21. Also, Lee discloses a recording device comprising means for performing an Optimum Power Control procedure (see Fig. 6, element 120) and means for writing the data stream (Fig. 6, element 130).

Regarding claim 23:

Lee discloses the method of claim 1 wherein the information to be recorded is substantially equally divided between the first layer and the second layer (see Fig. 1; when the entire disk is to be recorded, the information recorded thereon is equally divided between the two layers).

Regarding claim 24:

Lee discloses the method of claim 1 wherein the first layer contains a first data area containing approximately half the data stream and a middle area that contains none of the data stream (see Fig. 1; when the entire disk is to be recorded, half of the data stream is recorded in the first data area on layer 0; the LO area of the layer 0 does not contain any data stream), and the second layer contains a second data area containing the balance of the data stream, and a second middle area containing none of the data stream (see Fig. 1; when the entire disk is to be recorded, the second data area of layer 1 records the rest of the data stream; LI area of the layer 1 does not contain any data stream), and the first and second middle areas are approximately equal in size and approximately coextensive, and the first and second data areas are approximately equal in size and approximately coextensive (see Fig. 1).

Regarding claim 26:

Lee discloses the method of claim 1 wherein a first data area extends from a lead-in zone of the first layer to a radius R1 of the of the first layer (see Fig. 1; first data area corresponds to LI area and data area of layer 0), and a second data area extends beyond radius R1 of the first layer (second data area corresponds to area LO of layer 0), and a third data area extends from a lead out zone to a second radius R2 in the second layer (third data area corresponds to LO area and data area of layer 1), and a fourth data area extends beyond radius R2 (fourth data area corresponds to LI area of layer 1), and approximately half of the data stream is written to each of the first and third data areas (when the entire disk is to be recorded; half of the data stream is recorded to each of the first and third data areas), and substantially none of the data stream is written to the second and fourth data areas (the LO and LI area of the layer 0 and layer 1 does not contain any data stream), and at least one OPC-area is written in the second or fourth data

areas near the radius R1 or R2 (see Fig. 2; the lead-out area of the layer 0 which is located near radius R1 includes a test zone, which is used for optimum power calibration).

Regarding claim 27:

Lee discloses the method of claim 1 wherein the disk comprises:

a lead-in zone, a fist data zone, and a first middle zone in a first layer (see Fig. 1; layer 0); and

a second middle zone, a second data zone, and a lead-out zone in a second layer (see Fig. 1, layer 1); and

wherein the disk is a write once disc (see par. [0049]; the disk taught by Lee is capable of being a write once disc by utilizing the write protection information), and a data size of the stored data stream is variable between disks (this limitation is regard as intended use; the disk taught by Lee is capable of being used to record data stream of variable size), and the size and location of the lead-out area is independent of the data size of the stored data stream (see Fig. 1; the size and location of the LO area for any layer does not depend from the size of the data stream to be recorded).

Regarding claim 28:

Lee discloses a recording method for recording a data stream on a dual layer recordable disc (see Fig. 1), the disc having a first layer with a lead-in zone and a first data zone (Fig. 1, layer 0 includes a LI area and a first data area) and a second layer with a second data zone and a lead out area (Fig. 1, layer 1 includes a second data area and a LO area), the method comprising performing an Optimum Power Control (OPC) procedure for determining an actual optimum writing power, said Optimum Power Control procedure being performed in an OPC-area on the

disc (see Fig. 2; each of the LI and LO areas includes a test writing area for determining an actual optimum writing power), wherein the Optimum Power Control procedure is performed in an OPC-area located on at least one of the layers of the duel layer disc, and wherein the OPC-area is outside of the area to be recorded with the data stream (see Fig. 2; LI and LO areas does not record data stream), the data stream being written in portions of the first and second data zones using the determined optimum write power (see Fig. 1 and 2).

Lee does not disclose the Optimum Power Control procedure is being performed in an OPC-area variably located, and the OPC-area is located in the first or second data zones.

However, Hsiao discloses a recording method for recording a data stream on a recordable disk, the method comprising an act of performing an Optimum Power Control (OPC) procedure, said Optimum Power Control procedure is being performed in an OPC-area variably located on the disk and the OPC-area is in a data area (see Figs. 3A-3B and col. 4, lines 31-58).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the method of Lee with the teaching of Hsiao to realize a method of performing OPC procedure in variably located OPC-areas that are variably located on each recording layer and one of the OPC-area is in the user data area. One of ordinary skill in the art would have been motivated to do this because more desirable optimum writing power can be obtained for a particular location of the disk; hence high quality signal can be achieved.

Regarding claim 29:

Claim 29 recites similar limitations as claim 28; hence, claim 29 is rejected under the same reasons set forth in claim 28. Also, Lee discloses a recording device comprising means for

performing an Optimum Power Control procedure (see Fig. 6, element 120) and means for writing the data stream (Fig. 6, element 130).

4. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee in view of Hsiao as applied to claim 1 above, and further in view of Fujiune et al. (WO 02/086873; hereafter Fujiune; see US 2004/0156294 for English equivalent).

Regarding claim 25:

Lee does not disclose the feature in claim 25; however, Fujiune discloses a method of recording a data stream on a dual layer recordable disc having a first layer and a second layer (see Fig. 2(a)), wherein the disc has a data size and a data stream has a data size that is substantially less than the data size of the disc (see par. [0095]; the statements regarding "the recording is completed in the middle of the disc" and "For performing recording next time with increment" suggest that the data size of the stream is smaller than the data size of the disc) and the difference in the data size of the stream and the data size of the disc results in unused data area of the disc, and the unused data area is divided approximately equally between a first unused area of the first layer and a second unused data area of the second layer (see par. [0092]; the data stream is recorded alternately between the two layers; when recording is completed in the middle of the disc, the unused data area is divided equally between the two layer), and the unused data area of the first layer is approximately coextensive with the unused data area of the second layer (see Fig. 2(a); if data stream is only recorded in the zones 101 and zone 201, the unused data areas, i.e., zones 102-109 and 202-209, are coextensive).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Lee and Fujiune. One of the ordinary skill in the art

would have been motivated to do this because method taught by Fujiune enables an efficient recording/reproducing regardless of a capacity of a file and allows both seamless data and random access to data (see par. [0009]).

Response to Arguments

5. Applicant's arguments filed 06/02/10 have been fully considered but they are not persuasive.

Applicant argues that "the combination does not disclose "at least one of the variably located OPC-areas is positioned on the first or second layer and located relatively close to a radius where the data stream switches from the first layer to the second layer". However, Examiner respectfully disagrees. As pointed out in the previous rejection, Lee teaches a dual layer recordable disk having a first layer and a second layer. Each layer includes a lead-in area and a lead-out area. Each lead-in area and lead-out area includes a test writing area, which is the OPC-area. The test writing area in the lead-out area of the layer 0 is located relatively close to a radius where the data stream switches from the first layer to the second layer (see Fig. 1 and 2). Although Lee does not show OPC-area is variably located on the first or second layer; However, Hsiao is relied upon to show the advantage of having variably located OPC-areas. For example, Fig. 3A-3B and col. 4, lines 31-58 of Hsiao teaches that OPC-areas are variably located to provide more accurate recording power for the neighboring area (see col. 5, lines 38-43). Based on the teaching of Hsiao, it would have been obvious to a person ordinary skill in the art at the time the invention was made to further include variably located OPC-areas in a location close to a radius where the data stream switches from the first layer to the second layer. The

modification would have provided an accurate recording power for the specific location where the data is to be recorded.

Accordingly, claims 1-6, 21-24 and 26-29 are not patentable over Lee in view of Hsiao.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LIXI CHOW whose telephone number is (571)272-7571. The examiner can normally be reached on Mon-Fri, 8:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571-272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lixi Chow/
Primary Examiner, Art Unit 2627